DOCKET SECTION

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

POSTAL RATE AND FEE CHANGES, 1997	**Docket No. R97-1**

RESPONSE OF THE DIRECT MARKETING ASSOCIATION, INC. WITNESS BUC TO INTERROGATORIES OF THE UNITED STATES POSTAL SERVICE (USPS/DMA-T1-15-18)

The Direct Marketing Association, Inc. hereby provides responses of witness Buc to the following interrogatories of the United States Postal Service (USPS/DMA-T1-15-18), filed January 26, 1998.

Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

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USPS/DMA-T1-15. Please refer to your testimony at pages 19-20, and Attachment 1 to this interrogatory.

(a) Is it your testimony that the observations of letters being handled in flats operations, and so on, are the result of "misclocking"? If your answer is negative, please explain fully.

(b) Please confirm that the table in Attachment 1 provides a breakdown of the tally count data in spreadsheet DMA17.xls (USPS-LR-H-305) by the activity the employee is observed performing, as recorded in IOCS question 19.

(c) Please confirm that the table in Attachment 1 indicates that there are observations of letters being handled in flat operations, and so on, based on the employee's sampled (as opposed to clocked in) activity.

(d) Please confirm that the observations of letters being handled at flat cases, reported in Attachment 1, are not the result of "misclocking."

(e) If you do not confirm part (d), please explain your theory of how "misclocking" affects the employee's sampled activity. Please also explain, as necessary, whether your theory is simpler than alternate explanations for the data (e.g., that there are some letters in the flats mailstream since the dimensions of pieces are not individually measured when the letter and flat mailstreams are separated).

USPS/DMA-T1-15 Response:

(a) No. First, I believe that letters are sometimes handled in flat operations. For example, letters are sometimes cased with flats in flat cases. My testimony actually stated: "Because of misclocking, there are direct tallies and hence distributing sets with, for example, flats and parcels in letter operations and parcels in flat operations." (DMA-T-1 at 19-20). I believe that misclocking can result in certain anomalous observations, such as flat tallies in letter operations.

Your interrogatory seems to suggest that if there are reasonable explanations for the presence of flats and parcels at letter operations and parcels at flat operations, then the amount of misclocking would necessarily be small. I do not agree. Misclocking does not necessarily yield anomalous shape information. First,

as I stated in my testimony, a recent Inspection Service report suggested that misclocking is most prevalent for employees clocked into allied operations where all shapes of mail are handled, but where the employee is working in another operation. Second, misclocking can occur within flat operations or letter operations. An analysis of shape information can not identify, for example, how much time employees spend working on flat sorting machines while clocked into the manual flat sorting operation. In either event, misclocking will produce flawed distribution keys.

(b) I can only confirm that the numbers in the Total row are consistent with the numbers in the Total row of spreadsheet DMA17.xls.

(c) Confirmed.

(d) Confirmed.

(e) Not applicable.

USPS/DMA-T1-16. Please refer to your testimony at page 20 and to Tr. 17/8143-8144. Please confirm that you have not calculated the variance of witness Degen's distribution key entries (the ratio of IOCS costs for a particular subclass in a distribution key to total IOCS costs for the distribution key) or of distributed volume variable costs. If you do not confirm, please provide complete results of your analysis, along with complete documentation of statistical formulas and assumptions.

USPS/DMA-T1-16 Response:

Confirmed.

USPS/DMA-T1-17. Please refer to your testimony at pages [sic] 25.

(a) Is it your testimony that "not handling costs" are not causally related to mail handlings in the same cost pool? If not, please explain fully.

(b) Is it your testimony that witness Degen's not-handling distribution is incorrect primarily because you believe that "not handling costs" are not causally related to mail handlings in the same cost pool? If not, please explain fully.

(c) Suppose it is correct to assume that "not handling costs" are causally related to mail handlings in the same cost pool. Would it then be appropriate to distribute the "not handling costs" within the same cost pool? Please explain fully.

USPS/DMA-T1-17 Response:

(a) As I state on page 25 of my direct testimony ". . . Given that the Postal Service has yet to develop a fully satisfactory explanation of why not-handling cost are so large and why they differ so dramatically across operations, there is insufficient proof to support the assumption that they are caused by activities within individual cost pools." Furthermore, as I state on page 26 of my testimony, ". . . An alternative, and equally plausible, hypothesis of why not-handling mail costs are higher in some operations than in others is that the Postal Service assigns excess labor to specific operations, for example, where productivity is not measured or where there is little marketplace competition of the mail being handled (or not handled) in the operation . . . In this case, a less speculative distribution method would distribute not-handling mail costs across all cost pools as was done in R94-1 . . ."

(b) Although witness Degen has asserted that not-handling costs within a cost pool are caused by the handling costs, he has no evidence to support this assumption. Moreover, the distribution keys he uses to distribute the costs within pools are thin

and prone to clocking error. For all these reasons, I object to his within-pool distributions.

(c) It is never correct to assume the truth of propositions that can be tested when the costs at issue are as large as they are for not handling costs. With that qualification, if not handling costs were causally related to mail handlings in the same cost pool, and the distribution keys consisted of a sufficient number of tallies, then it would be appropriate to distribute these costs within pools, using the appropriate distribution key.

USPS/DMA-T1-18. Please refer to your testimony at page 25.

(a) Please provide the quantitative analysis of variability and/or cost causality, including all statistical tests that demonstrate the causal relationship between your cost driver(s) and "not handling costs," upon which your "not handling cost" distribution is based.

(b) If your answer to part (a) indicates that you have performed no quantitative analysis of variability or cost causality, please confirm that your proposed "not handling cost" distribution is based on untested assumptions regarding patterns of cost causality.

(c) If your answer to part (a) indicates that you have performed no quantitative analysis of variability or cost causality, please confirm that your own proposed "not handling cost" distribution is "unfounded" by the standards you apply to witness Degen's methodology. If you do not confirm, please explain fully.

USPS/DMA-T1-18 Response:

(a) Like the Postal Service, I did not perform quantitative analysis of variability for the relationship of not handling costs to cost drivers. This analysis could be done with sufficient time (two or three years), unlimited access to Postal facilities and data, and a large budget. Unlike the Postal Service, however, I examined both economic theory and performed quantitative analysis in deciding how to distribute not handling costs. My review of theory and analysis of the data showing the inefficiency and low levels of productivity of the Postal Service indicates that there is excess mail processing labor. Moreover, the data further shows that break time and time spent clocking in and out are very unevenly distributed across operations; this indicates that excess labor is most likely placed in operations where productivity is not measured and is not necessarily caused by the mail handled in that operation. Finally, the Postal Service has not analyzed the causes of not handling costs. For these reasons, I believe that the distribution of not handling costs within cost pools is unfounded and the better method is to distribute such costs across cost pools.

Economic theory indicates that cost-of-service providers are almost always inefficient. The Postal Service, itself, realized this in its Five Year Strategic Plan FY 1998-2002, at 14: "The existing Postal Service ratemaking process is a form of cost-of-service regulation. Over the last 25 years, this regulatory framework has been characterized as stifling innovation, promoting inefficiency, and shifting the focus of management away from the customer." Economic theory also tells us that monopolists are also almost always inefficient. Thus, given that the Postal Service is a cost-of-service monopolist, theory led me to believe strongly that it is extremely likely that the Postal Service is inefficient.

Having looked at theory, I next examined more quantitative measures. The two largest components of not-handling costs are break time and time spent clocking in and out of operations. Increasing break time and time spent clocking in and out of operations is a manifestation of declining productivity. As labor productivity has declined, personnel break time for clerks and mailhandlers has increased - from 8.6 percent of the workday in 1980 (Op. R90-1, App. J, at 4) to 13.83 percent in FY 1996 according to data furnished by the Postal Service. (Tr. 12/6205). This means that the average clerk or mailhandler now spends 1 hour and six minutes out of each 8 hour working day on breaks, up from 41 minutes a day in 1980. Furthermore, the same data show that the typical clerk or mailhandler now spends an average of 1 hour and 55 minutes in overhead activities (FY 1996 Cost Segments & Components), up from 1 hour and 19 minutes in 1980 (Op. R94-1, at III-9, Table III-1).

Productivity is the ratio of outputs to inputs. Increasing productivity can result

from learning, from adoption of new technologies, or from better management. Productivity increases have been low in the Postal Service. Witness Tayman provided total factor productivity indices for the United States Postal Service since 1971 in response to DMA/USPS-T9-28 (Tr. 9/4441-42). Total factor productivity takes account of changes in both capital and labor inputs. With an index of 1.00 in 1972, total factor productivity in the Postal Service increased to 1.0838 by 1996, or about one third of a percent annually. In contrast, multifactor productivity for the manufacturing segment of the economy increased by 20.9 percent, or nearly one percent per year, from 1972 to 1993, the last year for which the Bureau of Labor Statistics has released their estimates. Further, the Total Factor Productivity of the Postal Service has actually declined in each of the last three years. In contrast, witness Degen confirmed on oral cross examination that productivity increases in the railroad industry, a service industry, averaged 5 percent a year from 1991 to 1996. (Tr. 12/6648-49). Table 1, below, compares the productivity of the Postal Service and the manufacturing sector of the U.S. economy.

Labor productivity (output per labor hour) for the Postal Service has also been less than impressive. Witness Tayman provided labor productivity in response to DMA/USPS-T9-34 (Tr. 9/4452). While private sector manufacturing productivity increased by 83 percent from 1972 to 1996, Postal Service labor productivity has increased by only 20 percent over the same period.

Table 1. USPS and Private Sector Manufacturing Productivity Indices

Year	Total Factor/Multifactor Productivity		Labor Productivity	
	USPS	Manufacturing (1972=1)[1]	USPS	Manufacturing (1972=1)[2]
1971	.9883	.9626	.9918	.9639
1972	1.0000	1.0000	1.0000	1.0000
1973	1.0420	1.0257	1.0441	1.0279
1974	1.0230	.9778	1.0230	1.0394
1975	1.0141	.9544	1.0188	1.0722
1976	1.0092	.9907	1.0152	1.1149
1977	1.0299	1.0105	1.0453	1.1527
1978	1.0658	1.0269	1.0770	1.1658
1979	1.0440	1.0234	1.0557	1.1593
1980	1.0493	1.0093	1.0683	1.1658
1981	1.0557	1.0234	1.0640	1.1806
1982	1.0414	1.0374	1.0580	1.2430
1983	1.0355	1.0643	1.0623	1.2874
1984	1.0384	1.0981	1.0658	1.3268
1985	1.0369	1.1133	1.0691	1.3760
1986	1.0587	1.1343	1.0899	1.4384
1987	1.0630	1.1682	1.0949	1.4778
1988	1.0666	1.1752	1.1005	1.5008
1989	1.0600	1.1717	1.1016	1.5205
1990	1.0916	1.1659	1.1387	1.5484
1991	1.0736	1.1647	1.1373	1.5829
1992	1.0792	1.1963	1.1504	1.6420
1993	1.1200	1.2091	1.2033	1.6782
1994	1.1169	N/A	1.2124	1.7192
1995	1.0995	N/A	1.2014	1.7750
1996	1.0838	N/A	1.1985	1.8342

[1] Manufacturing Multifactor Productivity figures from Bureau of Labor Statistics (BLS) series MPU300003. This index can be obtained from the BLS World Wide Web site at "www.bls.gov."

[2] Manufacturing Labor Productivity figures from Bureau of Labor Statistics (BLS) series PRS30006093. This index can be obtained from the BLS World Wide Web site at "www.bls.gov."

Further supporting the Postal Service's capacity to increase productivity is a bench marking study performed for the Postal Service by Christiansen Associates entitled "Performance Analysis of Processing and Distribution Facilities: Sources of TFP Improvement" (USPS-LR-H-275). The study states that "The range of estimated savings, $1.9 to $2.6 billion . . . represents approximately 20-25% of mail processing and distribution costs" (USPS-LR-H-275 at 21). As witness Degen states, "The basic conclusion of the report was that by learning from the best facilities there was some potential for productivity improvement." (Tr. 12/6656).

Having thus examined general data on productivity and efficiency, I next explored indications that productivity has changed differentially at different operations implying that some operations are less efficient than others. If this were true it would support the hypothesis that not-handling costs are not causally related to handling costs by cost pools because it would indicate the excess labor constituting not-handling costs are arbitrarily placed in certain operations.

I analyzed the same MODS data on labor hours and total piece handlings that witness Bradley used to calculate volume variability to calculate productivity by MODS operation over the period of time from 1988 to 1996. Table 2 shows the results of the calculations using witness Bradley's "scrubbed" data, his preferred method for calculating productivity (see response to USPS/DMA-T14-16 (Tr. 11/5263-64)), and the cumulative percentage change in productivity over the time period. As the table shows, although productivity has declined in many operations over this period of time, the changes are very uneven. Flat sorting machine productivity has

dropped by about 18 percent while OCR productivity has declined by about 38 percent. Manual flat sorting productivity has declined only by about 6 percent.

As one might expect from economic theory, notwithstanding its general decline, productivity has increased dramatically for parcels, where the Postal Service faces competition from the private sector. Thus, manual parcel sorting productivity has increased by about 45 percent over this time period and the productivity for mechanical parcel sorting has increased by about 60 percent. This further supports my testimony that not handling costs are arbitrarily placed in cost pools: with parcels, the Postal Service must be efficient or lose its business, so excess labor is not assigned to these operations, keeping their productivity high.

Table 2. Productivity by MODS Operation and Cumulative Percentage Change in Productivity (000s of Pieces Handled per Hour)

Operation	1988	1989	1990	1991	1992	1993	1994	1995	1996	Change
Optical Character Reader	7.219	6.486	6.332	6.160	5.537	5.030	4.968	4.782	4.503	(38%)
Barcode Sorter	7.143	7.167	7.384	7.476	7.336	6.894	6.946	7.093	7.289	2%
Letter Sorting Machine	1.562	1.548	1.505	1.475	1.415	1.321	1.284	1.263	1.238	(21%)
Manual Letter Sorting	.610	.583	.567	.592	.593	.553	.565	.560	.547	(10%)
Manual Flat Sorting	.503	.489	.460	.485	.493	.469	.480	.473	.473	(6%)
Flat Sorting Machine	.893	.865	.846	.804	.770	.757	.743	.739	.734	(18%)
Manual Parcel Sorting	.191	.192	.202	.222	.249	.255	.259	.258	.277	45%
Mechanical Parcel Sorting	.112	.095	.120	.111	.121	.123	.125	.158	.179	60%
Small Parcel and Bundle Sorter (Non-Priority)[1]	N/A	.198	.217	.234	.248	.251	.238	.257	.272	37%
Manual Priority Mail Sorting	.241	.238	.233	.208	.216	.204	.200	.210	.225	(6%)
Small Parcel and Bundle Sorter	N/A	.259	.289	.325	.322	.307	.273	.270	.272	5%
Facer/Canceler	3.110	3.111	3.145	3.036	3.164	3.080	3.261	3.352	3.393	9%

[1] No hours or piece handling data are available for these operations in FY 1988; the cumulative percentage change in productivity is calculated using FY 1989 as the base year for these operations.

The Inspection Service also found evidence of inefficiency in operations where productivity is not measured. For example, in a FY 1997 National Coordination Audit of Allied Workhours (LR-H-236), the Inspection Service found, "Allied Workhours in P&DCs were loosely managed and inadequately controlled. The primary cause was management's inconsistency in monitoring these workhours . . . . We determined the Postal Service could have realized a 12.8 percent reduction in actual workhours expended. In Fiscal Year (FY) 1996, unrecovered opening unit cost reductions could have amounted to nearly $141 million, if higher locally demonstrated productivities were achieved." (LR-H-236, Executive Summary, at 2).

In sum, economic theory and a quantitative analysis of Postal Service mail processing productivity shows that not handling costs consist of non-productive excess labor which should be distributed across cost pools.

(b) Not confirmed. Given the quantitative evidence of inefficiency and misallocation of not handling costs (see subpart (a) above), my distribution of mail processing costs (including distribution of not handling costs across cost pools) is more consistent with mail processing data. Please recall that I recommend that the Commission use the method it approved in R94-1. Under this method, I am proposing that not handling costs be distributed in exactly the same way that the Postal Service distributed them in that case. If the Commission decides to accept any part of witness Degen's proposal, which I believe would be a serious mistake, I have suggested that they correct several of his most egregious flaws. Among these

is his distribution of not handling costs within MODS cost pools.

(c) As I explain in my responses to subparts (a) and (b) above, I do not believe my approach is unfounded.

DECLARATION

I, Lawrence G. Buc, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information, and belief.

Lawrence G Buc

Dated: February 9, 1998

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the rules of practice, as modified by the Special Rules of Practice.

Michael D. Bergman

February 9, 1998

Washington, D.C.